

HYDROGEN RECHARGING SYSTEM FOR  
FUEL CELL HYDRIDE STORAGE RESERVOIR

## ABSTRACT OF THE DISCLOSURE

5           A self-contained hydrogen recharging system (5) for a  
fuel cell metal hydride storage canister (100). A water  
reservoir (10) provides water (15) to an electrolyzer  
(20), where the water is converted into hydrogen gas (22)  
and oxygen gas (24). The hydrogen gas is dried (26) and  
10 then stored in an accumulator (30). When the metal  
hydride storage canister is ready to be refilled, it is  
connected by the user to the recharging system. A heat  
exchanger (55) heats the fuel cell hydride storage  
canister prior to transfer of the stored hydrogen gas, and  
15 then cools the fuel cell hydride storage canister during  
transfer of the stored hydrogen gas. The hydrogen gas  
stored in the accumulator is rapidly transferred to the  
hydride storage canister by means of a pump (60) and  
stowed in the canister as a metal hydride.

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